



Shared Prosperity Dignified Life



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**Economic and Social Commission for Western Asia (ESCWA)**

Improved Groundwater Management in the Arab Region  
Assessment of Climate Change Impacts on Groundwater Resources: National Workshop for Jordan and State of Palestine  
Amman, 27-29 February 2024

**Draft Agenda**

**Tuesday, 27 February 2024**

09:00-09:30 **In-person Check-in**  
*The workshop will be held in W Amman hotel, Amman, Jordan.*

**Opening Session and Introduction**

09:30-09:35 **Opening Statement**

- *Mr. Ziad Khayat, Coordinator, IWRM for Improved Water Security, Climate Change and Natural Resource Sustainability Cluster, Economic and Social Commission for Western Asia, ESCWA*
- *Mr. Ihab Jnad, Director, Water Resources Department, Arab Center for the Studies of Arid Zones and Dry Lands, ACSAD*

09:35-09:45 Tour de Table

09:45-9:50 Review of Workshop Objectives and Agenda

- *Mr. Ihab Jnad, ACSAD*

09:50-10:05 Study areas in Jordan and Palestine

- *Country representatives from Jordan*
- *Country representatives from Palestine*

**Session I Overview on Climate Change and Methods to Determine Recharge**

Presenters: *Mr. Ihab Jnad, Mr. Mazen Naaman, Mr. Mahmoud Al-Sibai, Water Resources Department, ACSAD*

10:05-10:30 RICCAR initiative and highlights

- *Ms. Tracy Zaarour, Research Assistant, Climate Change and Natural Resource Sustainability Cluster, ESCWA*

10:30-11:00 Coffee break

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| 11:00-12:00 | Extracting climate change data in the Arab region: 1) From RICCAR database, 2) from Earth System Grid Federation (ESGF) |
| 12:00-13:30 | Methods to determine recharge   |
| 13:30-14:30 | <b>Lunch</b>  |

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| <b>Session II</b> | <b>Groundwater Modeling</b> |
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| 14:30-16:00 | <ul style="list-style-type: none"> <li>• The importance of mathematical modeling of groundwater and a reminder of the stages of model building</li> <li>• Installing GMS modeling software and a quick introduction to it</li> <li>• Building the conceptual model</li> <li>• Review the conceptual model of the study area</li> </ul> |
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| <b>Wednesday, 28 February 2024</b> |
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| <b>Session III</b> | <b>Climate Data Extraction and Model Run for the Calibration Period</b> |
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| 9:00-10:30  | Extracting climate data   |
| 10:30-11:00 | Coffee break  |
| 11:00-12:30 | Preparing stress inputs and boundary conditions for the calibration period  |
| 12:30-13:30 | <b>Lunch</b>  |
| 13:30-16:00 | <ul style="list-style-type: none"> <li>• Running the model and reviewing the results for the calibration period</li> <li>• Adjusting the simulation period to include the projection period until 2070</li> </ul> |

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| <b>Thursday, 29 February 2024</b> |
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| <b>Session IV</b> | <b>Model Run for the Projection Period</b> |
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| 09:00-10:30 | Preparing the boundary conditions of the prediction period of one of the climate model and entering them into the model   |
| 10:30-11:00 | Coffee break  |
| 11:00-13:00 | Running the model for the projection period of one of the climate models: <ul style="list-style-type: none"> <li>• Review of modeling results</li> <li>• Summary of the results compared to the reference period</li> <li>• Preparation of groundwater level maps for the projection period</li> <li>• Preparation of drawdown maps for the projection period compared to the reference period</li> </ul> |
| 13:00-14:00 | <b>Lunch</b>  |
| 14:00-15:00 | Running the model for the prediction period of one of the climate models- Continued   |
| 15:00-15:45 | <ul style="list-style-type: none"> <li>• Guidance on the preparation of the case study report</li> <li>• Discussion</li> </ul>  |

**Session V****Summary Reflections and Next Steps**

15:45-16:00

Summary of next steps

- *Mr. Ihab Jnad, ACSAD*
  - *Mr. Ziad Khayat, ESCWA*
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